

**DECISION  
AND  
FINDING OF NO SIGNIFICANT IMPACT**

**Management of Coyote, Red Fox, Feral Dog, Wolf-Hybrid, and  
Exotic Carnivore Predation on Livestock in the State of Ohio**

The U.S. Department of Agriculture, Animal and Plant Health Inspection Service (USDA-APHIS), Wildlife Services (WS) program responds to requests for assistance from individuals, organizations and agencies experiencing damage caused by wildlife in Ohio. WS has prepared an environmental assessment (EA) that analyzes alternatives for managing coyote, red fox, feral dog, wolf-hybrid, and exotic carnivore predation on livestock in the state of Ohio. Ordinarily, according to APHIS procedures implementing the National Environmental Policy Act (NEPA), individual wildlife damage management actions may be categorically excluded (7 CFR 372.5(c), 60 Fed. Reg. 6000-6003, 1995). An EA was prepared in this case to facilitate planning, interagency coordination, and the streamlining of program management, and to clearly communicate with the public the analysis of cumulative impacts. The pre-decisional EA released by WS in July 2001 documented the need for assisting livestock producers with predation in Ohio and assessed potential impacts of various alternatives for responding to livestock predation problems. Comments from the public involvement process were reviewed for substantial issues and alternatives which were considered in developing this decision. The EA is tiered to the programmatic Environmental Impact Statement (EIS) for the Wildlife Services Program<sup>1</sup> (USDA 1997).

WS's proposed action was to implement an integrated wildlife damage management program that would include education and non-lethal and lethal methods to reduce livestock losses from predators throughout the state of Ohio and to incorporate WS's current technical assistance approach to managing livestock and predator conflicts. Direct control assistance will only take place after a request for services has been received and where permission has been granted by private landowner or government manager. Based on the analysis in the EA, I have determined that there will not be a significant impact, individually or cumulatively, on the quality of the human environment from implementing the proposed action, and that the action does not constitute a major federal action significantly affecting the quality of the human environment.

**Public Involvement**

The pre-decisional EA was prepared and released to the public for a 30-day comment period by a legal notice in the Columbus Dispatch, Cincinnati Enquirer, and The Plain Dealer (Cleveland) on July 14, 2001. The pre-decisional EA was also mailed directly to agencies, organizations, and individuals with probable interest in the proposed program. Seven comment letters were received by WS within the comment period. All comments were analyzed to identify substantial new issues, alternatives, or to redirect the program. All letters and responses are included in

---

<sup>1</sup> USDA (U.S. Department of Agriculture), Animal and Plant Health Inspection Service (APHIS), Animal Damage Control (ADC), 1997 (revised), Animal Damage Control Program, Final Environmental Impact Statement. Anim. Plant Health Inspection Serv., Anim. Damage Control. Hyattsville, MD. Volume 1, 2 & 3.

Appendix E, F, and G of the final EA document and will be maintained at the Ohio WS State Office, 200 N. High Street, Room 622, Columbus, OH 43215. Wildlife Services responses to specific comments and issues are included in Appendix A of this Decision and FONSI.

### **Affected Environment**

The areas of the proposed action include the entire State of Ohio, but more specifically, areas where livestock predation occurs or may occur. The proposed action could occur on private or public properties within the State of Ohio.

### **Objectives**

The objectives of the proposed action are to:

- 1) respond to 100% of the requests for assistance with the appropriate action (technical assistance or direct control) applying the WS Decision Model (Slate et al. 1992);
- 2) reduce coyote, fox, dog, wolf-hybrid, and exotic carnivore predation on livestock and poultry in Ohio to the greatest extent possible on properties where WS assistance is requested; and
- 3) maintain the lethal take of non-target species to a minimum.

### **Major Issues**

Several major issues were contained in scope of this EA. These issues were consolidated into the following 6 primary issues to be considered in detail:

- 1) Effects on Target (Coyote and Red Fox) Species Populations
- 2) Effects on Dog, Wolf-hybrids, and Exotic Carnivores
- 3) Effect on Non-target Wildlife Populations, including Threatened and Endangered Species
- 4) Effects on Human Health and Safety
- 5) Humaneness of Control Methods used by WS
- 6) Effects on Aesthetic Values of Target and Non-target Species

### **Alternatives Analyzed in Detail**

Six potential alternatives were developed to address the issues identified above. A detailed discussion of the anticipated effects of the alternatives on the objectives and issues are contained in the EA. The following summary provides a brief description of each alternative and its anticipated impacts.

Alternative 1 - No Action, Technical Assistance (TA) Only - This alternative precludes any and all direct control activities by WS to protect livestock from predation in Ohio. Producers or any other entity directed at preventing or reducing predation of livestock could conduct direct control activities in the absence of WS involvement. However, if requested, affected producers would be provided with TA information only. Impacts of this alternative would be variable dependent upon actions taken by affected resource owners. This alternative would allow WS to respond to all requests with TA, but would not meet the management objectives of this EA and would leave some members of the public without a means to reduce depredation on livestock.

Alternative 2 - Non-lethal Control Only - Under this alternative, only non-lethal direct control activities and recommendations would be provided by WS to resolve coyote, fox, feral dog, wolf-hybrid, or exotic carnivore predation on livestock. Requests for information regarding lethal management approaches would be referred to DOW, local animal control agencies, or private businesses or organizations. Individuals or agencies might choose to implement WS non-lethal recommendations, implement lethal methods or other methods not recommended by WS, contract for WS direct control services, use contractual services of private businesses, use volunteer services of private organizations, or take no action. In some cases, control methods employed by others could be contrary to the intended use or in excess of what is necessary. WS would not be involved in lethal control actions. However, persons receiving non-lethal assistance could still resort to lethal methods that were available to them including shooting, calling and shooting, snares, and trapping. Effects of lethal control would be variable dependent upon actions taken by affected resource owners. This alternative would not allow WS to respond to all requests, would not meet the management objectives of this EA, and would leave some members of the public without a means to reduce depredation on livestock.

Alternative 3 - Non-lethal Control before Lethal Control - This alternative would require that all non-lethal methods or techniques be applied and determined to be inadequate by WS in each damage situation prior to the implementation of any lethal method or technique. This would be the case regardless of the severity or intensity of predation on livestock. This alternative would not allow WS to respond to all requests in an effective manner and would negatively impact some members of the public when non-lethal methods are ineffective at reducing losses in a timely manner.

Alternative 4 - Lethal Control Only - Under this alternative, only lethal direct control activities and recommendations would be provided by WS to resolve coyote, fox, feral dog, wolf-hybrid, or exotic carnivore predation on livestock. Depredating carnivores would be lethally removed under this alternative by WS, but not to the extent that statewide native wildlife populations would be negatively impacted. Requests for information regarding non-lethal management approaches would be referred to DOW, local animal control agencies, or private businesses or organizations. Individuals or agencies might choose to implement WS lethal recommendations, implement non-lethal methods or other methods not recommended by WS, contract for WS direct control services, use contractual services of private businesses, use volunteer services of private organizations, or take no action. In some cases, control methods employed by others could be contrary to the intended use or in excess of what is necessary. This alternative would not allow WS to respond to all requests, would not meet the management objectives of this EA, and would leave some members of the public without a means to reduce depredation on livestock.

Alternative 5 - Integrated Wildlife Damage Management (IWDM) (Proposed Action) - This alternative would incorporate an IWDM program utilizing any legal technique or method, used singly or in combination, to meet requester needs for resolving predation on livestock and conflicts with coyotes, foxes, feral dogs, wolf-hybrids, and exotic carnivores. Depredating carnivores would be lethally removed under this alternative by WS, but not to the extent that statewide native wildlife populations would be negatively impacted. Cooperators requesting

assistance would be provided with information regarding the use of effective non-lethal and lethal techniques. In many situations, the implementation of non-lethal methods are best implemented by livestock producers and would be the responsibility of the requester to implement. This alternative would allow WS to respond to all requests and would meet the management objectives of this EA.

Alternative 6 - No Federal WS Predator Damage Management in Ohio - This alternative would result in no assistance from WS in reducing predator damage to livestock in Ohio. WS would not provide technical assistance or operational damage management services. All requests for predator damage management would be referred to the DOW, local animal control agencies, or private businesses or organizations. Assistance may or may not be available from any of these entities. Impacts of this alternative would be variable dependent upon actions taken by affected resource owners. This alternative would not allow WS to respond to any requests, would not meet the management objectives of this EA, and would leave some members of the public without a means to reduce depredation on livestock.

#### **Alternatives Considered but not Analyzed in Detail with Rationale**

Compensation for Wildlife Damage Losses - The Ohio Department of Agriculture Indemnity Program (ORC §955.51) currently reimburses livestock producers for losses due to coyote predation. Although this reimbursement provides producers monetary compensation for losses, it does not remove the problem nor does it assist with reducing future losses from predation. Analysis of this alternative in USDA (1997) shows that it has many drawbacks:

- Compensation would not be practical for public health and safety problems.
- It would require larger expenditures of money to investigate and validate all losses, and to determine and administer appropriate compensation.
- Timely responses to all requests to assess and confirm losses would be difficult, and many losses may not be verified.
- Compensation would give little incentive to limit losses through other management strategies.
- Not all resource managers/owners would rely completely on a compensation program and unregulated lethal control would probably continue and escalate.

As stated above, the Indemnity Program only reimburses for losses due to coyote predation, and does not address feral dog, fox, or other predators that attack and kill livestock. Regardless of the predator, compensation for losses does not resolve the initial problem of predation for producers and losses continue.

Coyote Bounties - During the early years of game management, many states relied on massive killing efforts (bounties) to reduce predator numbers (e.g., wolves, coyotes, foxes) which were competing with man for game animals (e.g., white-tailed deer). Bounties are not used by most wildlife agencies nor are they supported by WS for predator control because:

- Bounties are not effective in reducing damage.
- Circumstances surrounding take of animals is largely unregulated.

- No process exists to prohibit taking of animals from outside the damage management area for compensation purposes.
- Bounty hunters may mistake dogs and foxes as coyotes.
- Officials responsible for checking in coyotes may mistake dogs and foxes as coyotes.
- Coyote bounties have a long history (>100 years in the U.S.) of use in many states without ever achieving the intended results of reducing damage and population levels (Parker 1995).

The overwhelming disadvantage of coyote bounties is the misdirection of funds meant to, but not effectively and economically able to, reduce coyote damage to livestock.

Fertility Control of Predator Populations - Fertility control of predator populations may include surgical sterilization (vasectomies or tubal ligations), endocrine regulation (steroids, GnRH [gonadotropine-releasing hormone], antiprogestins), and immunocontraception. Endocrine regulation agents are designed to control hormone levels and regulate fertility in vertebrate species. Immunocontraception uses an individual's own immune system to disrupt reproduction. Although these fertility control methods have shown promise, they can be costly and with the exception of sterilization, need to be administered (boosted) regularly to maintain effectiveness. Many hurdles must be overcome before fertility control becomes a viable wildlife management control alternative. These include, but are not limited to, the development of contraceptive agents that are orally deliverable, species specific, reversible, have few side-effects, and are cost effective (Sanborn et al. 1994).

Fertility control is still in the developmental stages and the full effects on wildlife populations and cost effectiveness is being evaluated. The National Wildlife Research Center (NWRC) (the research branch of the WS program) is evaluating the effects of fertility control on coyote populations. Preliminary findings indicate that surgically sterilized coyotes maintain pair bonds, defend territories, and kill significantly fewer sheep than unsterilized coyotes. Furthermore, coyotes given multiple porcine zona pellucida (PZP, an immunosterilant) injections are immunologically sterilized and continue to maintain pair-bonds and successfully defend territories in pen tests. These results are promising; however, immunosterilization was not permanent and could break down, allowing previously sterile females to produce offspring. In addition, the effectiveness of surgical sterilization was only cost efficient when it involved 1-3 packs of coyotes.

Although there may be some applications for fertility control, use of these methods to protect livestock throughout the State of Ohio would not be cost effective or practical at this time. Fertility control also may effect the genetics of a population over a large area. Because these management techniques are still in the preliminary stages and researchers do not fully understand the effects on wildlife populations, considering fertility control to reduce predation on Ohio's livestock would be precipitous and premature. In addition, before the use of fertility control could be used on predator or other wildlife populations in the State of Ohio, the DOW would need to be consulted and would decide if these methods could be used for population control. The Ohio WS program will keep updated on new findings with regards to fertility control use on predator populations and will consider use of these methods if they become feasible for controlling predation on livestock in Ohio.

Corrective Predator Damage Management Only, No Preventative Damage Management - Some people believe lethal management actions should be implemented to stop predation on livestock only after predation has started. These people oppose preventative lethal management actions which may involve removal of coyotes living near livestock operations even though these same livestock operations have chronic historic predation. While WS is unable to predict which predator will kill livestock or which livestock operations will have substantial predator losses, WS can look at historical records for each farm and draw inferences. On livestock operations with historic predator losses, it is likely there will be future losses. Therefore, it is prudent for the livestock manager to have predators removed as good husbandry, especially prior to lambing, kidding, or calving. WS is able to better serve the livestock industry when requests for assistance are more evenly distributed rather than being overwhelmed with requests for service, especially during spring lambing, kidding, and calving.

Require Livestock Producers to Help Themselves before Receiving Assistance from WS - Although no law or policy requires livestock producers to employ husbandry or other predator prevention practices to protect their livestock, 39% of cattle and 83% of sheep producers in the U.S. report using non-lethal methods to help themselves (NASS 1999). In 1998, cattle and sheep producers in the U.S. spent \$3.2 and \$4.1 million on non-lethal management methods, respectively (NASS 1999).

Livestock producers in the U.S. employ many lethal and non-lethal management methods to reduce predator losses. The most frequently used non-lethal methods include: guard animals, fencing, shed birthing, herding, night penning, and frightening tactics (NASS 1999). WS policy is to respond to all requests for assistance within program authority, responsibility, and budget. If improved husbandry and other non-lethal methods would reduce predation on livestock, then WS will recommend these practices following the IWDM approach.

No Use of Chemical Methods - Much of the public's concern over the use of registered toxicants for predator damage management is based on an erroneous perception that WS uses non-selective, outdated chemical methodologies. In reality, the chemical methods currently used by WS have a high degree of selectivity (see section 4.1.4 of the EA). WS use of registered toxicants is regulated by the EPA through the FIFRA, by MOU's with other agencies, and by program directives. In addition, APHIS conducted a thorough risk assessment and concluded that chemicals used according to label directions are selective for target individuals or populations, and therefore, have no negligible impacts on the environment (USDA 1997, Appendix P).

The decision to use registered toxicants falls within the WS Decision Model (see section 3.2.3 of the EA) (Slate et al. 1992). Chemical methods are used because they allow for efficient and effective delivery of service to more livestock producers than would be served if registered toxicants were unavailable. Most registered toxicants have the ability to work during inclement weather and solve predation problems, whereas, traps and snares may be inoperable and shooting impractical in the same inclement weather.

Relocation of Coyotes and Foxes Killing Livestock - Section §1501:31-15-03 of the OAC prohibits relocation of raccoons, opossums, skunks, coyotes and foxes in Ohio. Translocation of wildlife is also discouraged by WS policy (WS Directive 2.501) because of stress to the relocated animal, poor survival rates, and difficulties in adapting to new locations or habitats (Nielsen 1988).

**Finding of No Significant Impact (FONSI)**

The analysis in the EA indicates that there will not be a significant impact, individually or cumulatively, on the quality of the human environment as a result of this proposed action. I agree with this conclusion and, therefore, find that an EIS need not be prepared. This determination is based on the following factors:

- 1) Livestock predator damage management as conducted by WS in the State of Ohio is not regional or national in scope.
- 2) Based on the analysis documented in the EA, the impacts of the proposed action will not significantly affect public health or safety. Risks to the public from WS methods were determined to be low in a formal risk assessment (USDA 1997, Appendix P).
- 3) The proposed action will not have a significant impact on unique characteristics such as park lands, wetlands, wild and scenic areas, or ecologically critical areas. Built-in mitigation measures that are part of WS's standard operating procedures and adherence to laws and regulations will further ensure that WS activities do not harm the environment.
- 4) The effects on the quality of the human environment are not highly controversial. Although certain individuals may be opposed to managing livestock predators, this action is not controversial in relation to size, nature, or effects.
- 5) Mitigation measures adopted and/or described as part of the proposed action minimize risks to the public, prevent adverse effects on the human environment, and reduce uncertainty and risks. Effects of methods and activities, as proposed, are known and do not involve uncertain or unique risks.
- 6) The proposed action does not establish a precedent for future actions, including future predator damage management that may be implemented or planned within the State.
- 7) The number of predators that will be taken by WS annually is very small in comparison to regional and statewide populations. Adverse effects on other wildlife species and on wildlife habitat would be minimal. The EA discussed cumulative effects of WS on target and non-target species populations and concluded that such impacts were not significant for this or other anticipated actions to be implemented or planned within the State.

- 8) This action will not adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places and will not cause loss or destruction of significant scientific, cultural, or historic resources. Wildlife damage management would not disturb soils or any structures and, therefore, would not be considered a "Federal undertaking" as defined by the National Historic Preservation Act.
- 9) WS determined that the proposed project would not adversely affect Federally or Ohio State listed threatened or endangered species.
- 10) The proposed action is consistent with local, state, and Federal laws that provide for or restrict WS wildlife damage management. Therefore, WS concludes that this project is in compliance with Federal, state and local laws for environmental protection.

#### Decision and Rational

I have carefully reviewed the Environmental Assessment (EA) prepared for this proposal and the input from the public involvement process. I believe that the issues identified in the EA are best addressed by selecting Alternative 5 (*Integrated Wildlife Damage Management - Proposed Action*) and applying the associated mitigation measures discussed in Chapter 3 of the EA. Alternative 5 is selected because (1) it offers the greatest chance at maximizing effectiveness and benefits to resource owners and managers while minimizing cumulative impacts on the quality of the human environment that might result from the program's effect on target and non-target species populations; (2) it presents the greatest chance of maximizing net benefits while minimizing adverse impacts to public health and safety; and, (3) it offers a balanced approach to the issues of humaneness and aesthetics when all facets of these issues are considered. The comments identified from public involvement were minor and did not change the analysis. Therefore, it is my decision to implement the proposed action as described in the EA.

Copies of the EA are available upon request from the Ohio WS State Office, 200 N. High Street, Room 622, Columbus, OH 43215.



Rick Owens  
Acting Director, Eastern Region, USDA-APHIS-WS

9/28/01  
Date

## Literature Cited

- Bailey, J. A. 1984. Principles of wildlife management. John Wiley and Sons, Inc. 373 pp.
- Blejwas, K. M., B. N. Sacks, M. M. Jaeger, and D. R. McCullough. In Press. The effectiveness of selective removal of breeding coyotes in reducing sheep predation. *Journal of Wildlife Management*. 25 pages.
- Conner, M. M., M. M. Jaeger, T. J. Weller, and D. R. McCullough. 1998. Effect of coyote removal on sheep depredation in northern California. *Journal of Wildlife Management*. 62:690-699.
- Knowlton, F. F., E. M. Gese, and M. M. Jaeger. 1999. Coyote depredation control: An interface between biology and management. *Journal of Range Management*. 52:398-412.
- Nielsen, L. 1988. Definitions, considerations and guidelines for translocation of wild animals. Pages 12-49 in *Translocation of wild animals*. Ed. L. Nielsen and R. D. Brown. WI Humane Society, Inc. and Ceaser Kleberg Wildlife Research Instit. 333 pp.
- Parker, G. 1995. Eastern Coyote: The story of its success. Nimbus Publishing Limited. P.O. Box 9301, Station A, Halifax, N.S. B3K 5N5.
- Sacks, B. N., M. M. Jaeger, J. C. C. Neale, and D. R. McCullough. 1999a. Territoriality and breeding status of coyotes relative to sheep predation. *Journal of Wildlife Management*. 63:593-605.
- Sacks, B. N., K. M. Blejwas, and M. M. Jaeger. 1999b. Relative vulnerability of coyotes to removal methods on a northern California. 63:939-949.
- Sanborn, W. A., R. H. Schmidt, and H. C. Freeman. 1994. Policy considerations for contraception in wildlife management. *Proc. 16th Vertebr. Pest Conf.* 16: 311-316.
- Slate, D. A., R. Owens, G. Connolly, and G. Simmons. 1992. Decision making for wildlife damage management. *Trans. North Am. Wildl. Nat. Resour. Conf.* 57: 51-62.
- USDA. 1997. Final Environmental Impact Statement. U.S. Dept. Agric., Anim. Plant Health Inspection Serv., Animal Damage Control, Operational Support Staff, 4700 River Road, Unit 87, Riverdale, MD 20737.
- Wagner, K. K. and M. R. Conover. 1999. Effect of preventative coyote hunting on sheep losses to coyote predation. *Journal of Wildlife Management*. 63:606-612.
- NASS. 1999. 1999 Livestock wildlife damage survey results. U.S. Dept. Agric., Natl. Agric. Statistics Serv., Washington, DC.

## **Appendix A**

### **Response to Comments to the Environmental Assessment “Management of Coyote, Red Fox, Feral Dog, Wolf-Hybrid, and Exotic Carnivore Predation on Livestock in the State of Ohio”**

**Issue 1:** *A statewide EA lacks the information necessary for “site specific” analysis.*

**Program Response 1:** WS addressed this issue in Sections 1.7.4 and 2.4.2 of the EA.

**Issue 2:** *Wildlife Services (WS) control activities may have detrimental effects on wildlife abundance and diversity.*

**Program Response 2:** The impacts of the current WS program on biodiversity are not significant nationwide or statewide (USDA 1997). The goal of integrated wildlife damage management programs are to reduce damage, with some programs containing a component of reducing the local target species population. The proposed action would have no effect on biodiversity at the state and county level. Biodiversity on individual properties would likewise not be affected. Regarding predators, local areas may have lower predator densities after the project, but no area would be devoid of all predators. Habitats and ecosystems would not be negatively affected, and no secondary adverse impacts on other species would be created. In some areas, where predators are negatively impacting native wildlife species, species diversity may increase where local predator numbers are reduced. As analyzed in sections 4.1.1 and 4.1.3 of the EA, WS would have no adverse effects on statewide coyote and red fox populations or other wildlife populations.

**Issue 3:** *Inadequate justification of the need for action; There is not a need to use lethal control as a means of reducing livestock predation in Ohio.*

**Program Response 3:** Lethal control is a reasonable and at times a necessary management tool used to effectively reduce livestock predation. As described in section 3.2 of the EA, lethal control is considered as part of an Integrated Wildlife Damage Management (IWDM) approach used to effectively resolve wildlife conflicts. The decision model outlined in section 3.2.3 of the EA identifies a number of relevant considerations in determining an appropriate control strategy. These factors include the regulatory framework, economic losses and costs, social acceptability, effectiveness, and others. This model allows for consideration of a broad range of factors in selection of control strategies in an effort to find an acceptable balance between human interests and wildlife needs, including both lethal and nonlethal approaches to resolving conflicts.

In the Southern Utah Wilderness Alliance, et al. vs. Hugh Thompson, Forest Supervisor for the Dixie National Forest, et al., the United States District Court of Utah denied plaintiffs' motion for preliminary injunction. In part, the court found that a forest supervisor need only show imminent threat of damage is probable to establish a need for wildlife damage management (U.S. District Court of Utah 1993).

**Issue 4: *The EA is not an objective evaluation of the alternatives and their potential impacts; the draft EA fails to satisfy the requirements of the National Environmental Policy Act (NEPA).***

**Program Response 4:** WS follows all applicable laws, regulations, and guidelines in analyzing potential impacts of their actions, including those established by NEPA. In making an informed decision of potential environmental impacts, WS uses the best available scientific information, data and expert advise. Appendix A of the EA provides a list of 136 documents that are used and referenced throughout the EA for analyzing potential impacts of the proposed program and Chapter 5 of the EA provides a list of the persons consulted in the development of the EA. Potential impacts are systematically analyzed in Chapter 4 of the EA. Each issue is fully explained and analyzed against each alternative to allow the reader an objective way to evaluate potential outcomes of each alternative. By conducting such a systematic and objective analysis, and using the best available scientific information, data and expert advise, WS is able to make an informed decision as required by NEPA.

**Issue 5: *WS's own research indicates that generalized killing is ineffective at reducing predation losses.***

**Program Response 5:** As stated in sections 1.2.1, 3.1.5, and 3.2 of the EA, the proposed action does not intend to conduct generalized killing throughout the state of Ohio. An integrated wildlife damage management plan utilizing education, non-lethal and lethal techniques will be used to reduce livestock losses caused by predators. Knowlton et al. (1999) states that "Various techniques can prevent or curtail predation on livestock but none are universally effective", "...removing coyotes to solve depredation problems is typically more effectively done by wildlife management personnel", and that "successful depredation management requires a variety of techniques used in an integrated program." Blejwas et al. (In Press) and Sacks et al. (1999a, 1999b) found that breeding adults whose territories contained sheep were typically responsible for the killing of livestock and that targeting those individuals for removal reduced predation to livestock. Wagner and Conover (1999) found that preventative damage management in areas of historic predation on livestock significantly reduced predation to livestock and was cost effective. Conner et al. (1998) suggested that coyote removal efforts should occur just prior to known peaks of predation. When implemented, mechanical and lethal methods used by WS will target individuals responsible for predation of livestock.

**Issue 6: *Livestock producers should be expected to attempt to prevent predation by utilizing non-lethal/livestock husbandry techniques before requesting federal assistance.***

**Program Response 6:** WS recognizes the importance of good husbandry and management practices in helping to reduce wildlife damage. WS policy is to respond to all requests for assistance within program authority and responsibility. If improved husbandry practices would likely reduce a predation problem, WS makes recommendations regarding these practices. Although, there is no law or policy requiring livestock producers to employ good husbandry practices to protect their livestock, most Ohio livestock producers do employ a variety of husbandry practices and nonlethal damage management methods to protect their livestock as a matter of good business.

**Issue 7: *Non-lethal control methods should be used before lethal control methods.***

**Program Response 7:** WS addressed this issue in section 3.1.3 and was fully analyzed in Chapter 4 of the EA. WS recognizes the importance of non-lethal methods as an important dimension of IWDM and non-lethal methods are considered or used first in each damage management strategy, if applicable, as described in the Proposed Alternative. These non-lethal methods are promoted through program directives, literature and in personal consultations with affected resource owners. A blanket prohibition of the use of lethal controls until nonlethal controls have been tried and found to be unsuccessful, could result in increased losses to resource owners. A major increase in expenditures, including livestock losses, could threaten the existence of some producers, particularly those with marginal operations.

**Issue 8: *Livestock losses are compensated by the State of Ohio.***

**Program Response 8:** WS addressed this issue in Sections 3.3.1. The Ohio Department of Agriculture (ODA) only reimburses the livestock owner for livestock losses caused by coyotes. In addition, only livestock injuries or losses that can be confirmed by both Dog Warden and Wildlife Officer that a coyote was responsible for the loss will be reimbursed the "Fair Market Value" on the day the animal was confirmed injured or killed (Ohio Revised Code §955.51-955.53). Many losses are denied claim or not reported because: 1) of insufficient evidence as to species responsible for death, 2) claims made after 3 day reporting date from date of kill, 3) livestock found too late to identify cause of death, and 4) livestock disappear and are never located (D. Goeglein, Ohio Department of Agriculture, Reynoldsburg, Ohio, personal communication). Although wildlife damage levels may appear relatively light, when compared to the overall value of agricultural production and the losses to other causes, losses to individual producers or to groups of producers can be severe. In situations where producers were reimbursed for losses in lieu of predator control efforts, losses to coyotes were typically higher, ranging from 12-29% of lambs and 1-8% of ewes (Knowlton et al. 1999).

**Issue 9: *The federal government spends tax dollars on the killing of wildlife; Livestock protection dollars should be used to address the causes of livestock losses and not used for livestock protection purposes.***

**Program Response 9:** Funding for WS comes from a variety of sources in addition to federal appropriations. Ohio agency funds, county funds, city funds, private funds, and other federal agency funds are applied to the program under Cooperative Agreements. Federal, state, and local officials have decided that wildlife damage management should be conducted by appropriating funds. WS was established by Congress as the agency responsible for providing wildlife damage management to the people of the United States. Wildlife damage management is an appropriate sphere of activity for government programs, since aspects of wildlife damage management are a government responsibility and authorized and directed by law. WS legislative mandate is described in section 1.8.1.1 of the EA.

**Issue 10: *Sheep and lamb losses are compensated by the State of Ohio; there is no need to use lethal control to reduce sheep and lamb predation in Ohio.***

**Program Response 10:** See Program Response 8. WS will always recommend non-lethal management methods to producers; however, costs to the producer may be excessive or the

methods impractical. Although there are reports of success with non-lethal methods, failures are common, few have been subjected to experimental tests, and none have proven universally successful (Knowlton et al. 1999).

**Issue 11:** *WS proposed livestock protection program is non-selective at removing predators that are causing livestock losses.*

**Program Response 11:** WS employees are experienced and trained to use the most selective and target specific methods available for removing depredating predators. Mitigation measures, as described in section 3.4 of the EA, ensure that only individual problem animals are removed. Furthermore, as described in section 3.2.3 of the EA, WS utilizes a decision making process (Slate et al. 1992) to select the most appropriate method to effectively resolve a particular damage situation. Each specific damage situation is carefully evaluated to ensure that only predators that are depredating or have the potential to depredate livestock are being impacted by WS activities.

**Issue 12:** *The EA lacks detailed information on specific livestock losses caused by predators in Ohio; there are no reports of domestic animals being preyed by foxes, wolf-hybrids and exotic carnivores in Ohio.*

**Program Response 12:** Livestock losses caused by predators in Ohio has been reported in Section 1.2 of the EA. Although occurrences are low, fox, wolf-hybrid, and exotic carnivore predation on livestock in Ohio does occur throughout the state (E. Householder, USDA, Wildlife Services, Ohio, personal communication; T. Conant, President, Ohio Dog Wardens Association, personal communication; ODA unpublished data). Unfortunately, this data only exists in field log notebooks and in Dog Warden Reports that have not been compiled.

**Issue 13:** *The EA lacks historical information for past WS involvement in livestock predator control in Ohio.*

**Program Response 13:** WS involvement with predator control in Ohio in the past consisted of technical assistance only; therefore, WS has not taken predators or non-target species in response to livestock depredation in Ohio. As mentioned in section 1.2 of the EA WS has responded to 726 incidents of predation on livestock by coyotes (n = 716), red fox (n = 5), and feral dogs (n = 5) with technical assistance (unpublished MIS data).

**Issue 14:** *The EA should weigh the benefits and risks of using M-44's and 1080 livestock collars.*

**Program Response 14:** WS addressed this issue in Appendix B and Chapter 4 of the EA. WS personnel are aware of and are concerned about the risks of chemicals used for wildlife damage control. The Ohio WS program complies with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). Only trained and certified applicators are permitted to apply restricted-use pesticides. When APHIS WS personnel use pesticides, precautions are taken to assure that these materials are used in ways that pose the least possible risk to the environment and public health and safety. APHIS WS personnel also recommend equally safe practices to private users through technical assistance activities and instruct those users to abide by applicable regulations and the EPA label instructions required by those regulations.

***Issue 15: The EA should be replaced by a full Environmental Impact Statement (EIS).***

**Program Response 15:** WS has determined that the analysis in the EA showed no significant impact on the quality of the human environment. The EA took a hard look at the need for action, the issues, alternatives, and environmental consequences, and resulted in a FONSI that discussed, under each of the ten CEQ points of significance, why each was not significant. WS carefully considered all comments from respondents to the public involvement efforts. The agency followed CEQ NEPA regulations, and Agency NEPA implementing procedures. Thus, the EA resulted in a FONSI that specified why an EIS was not required.